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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/455,457	12/06/1999	KOUSUKE INOUE	104895	5147

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EXAMINER

PHAM, HAI CHI

ART UNIT	PAPER NUMBER
2861	

DATE MAILED: 05/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)	
09/455,457	INOUE, KOUSUKE	
Examiner	Art Unit	
Hai C Pham	2861	

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on ____.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-5 is/are pending in the application.

4a) Of the above claim(s) ____ is/are withdrawn from consideration.

5) Claim(s) ____ is/are allowed.

6) Claim(s) 1-3 and 5 is/are rejected.

7) Claim(s) 4 is/are objected to.

8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on ____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. ____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). ____.

2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ . 6) Other: ____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (U.S. 5,930,019) in view of Yokota et al. (U.S. 4,449,151).

Suzuki et al. discloses a split light scanning optical apparatus including a plurality of split scanning units (provided around by the two laser diodes 12a, 12b, Fig.1) for performing scanning within split areas split in a main scanning area and performs exposure for one-time main scanning by performing scanning at the same time by the plurality of split scanning units (Fig. 1), the split scanning optical apparatus comprising an image information split part that is provided with overlap areas in scanning areas of the split scanning units, an identical portion on a surface to be scanned being exposable mutually in the overlap areas, and splits image information to be provided by exposure to a surface to be scanned into split image information to be provided respectively by

the split scanning units (the irradiation timing of the laser beams A and B are controlled so that the image areas of the laser beams A and B overlap each other by a specified number of dots) (Fig. 16), a plurality of storage parts (image memories 11 and 12 for the respective light sources A and B) (Fig. 34) that respectively store the split image information.

However, Suzuki et al. fails to teach the plurality of address specification parts that respectively specify storage addresses to the storage parts, the store operation control part, and the dummy signal as a light source off signal to addresses within the range of the overlap area, the information split being performed based on the detection of the overlapping portion.

Nevertheless, Yokota et al. teaches a solid-state scanning apparatus for capturing image information to be stored in appropriate paired memory devices (49/51 and 50/52) to be read out as image formation for the reproduction of the original image, which includes a store operation control device (53) that controls a store operation of the memories so that a split position of the image information having the overlapping range (overlapping portion C) stored in each of the pairs of memory devices specified by the address specification parts (Fig. 6). Yokota et al. further teaches one of the pairs of the memory devices storing invalid data at the addresses within the range of the overlap area, the invalid data would correspond to a light source off since during the readout operation, the invalid data is not supplied as output.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the device of Suzuki et al. with the

aforementioned teaching of Yokota et al. The motivation for doing so would have been to allow a full single scanning line to be continuously produced.

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. in view of Yokota et al., as applied to claim 1 above, and further in view of Agulnek (U.S. 4,092,632).

Suzuki et al. in view of Yokota et al., discloses all the basic limitations of the claimed invention except for the timing change part.

However, Agulnek discloses a crossover arrangement for multiple scanning arrays in which the image information are stored in separate memories where a predetermined pixel of the array within the array overlap is mapped into a known bit position at the point of overlap such that the next pixel in the overlapped region can be picked for the next bit in the succeeding array during the readout operation of the image information for reproduction purpose. Once the optimum crossover point has been determined and stored in a memory the data bit crossover would determine the timing change for the split information.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the device of Suzuki et al., as modified by Yokota et al., with the aforementioned teaching of Agulnek. The motivation for the combination would have been to provide a proper stitch point between the split scanning lines so as to generate a single full main scanning line without gap.

Allowable Subject Matter

5. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the primary reason for the indication of the allowability of the claimed invention, with respect to claim 4, is the inclusion of the limitation, in the combination as currently claimed, that the store operation control part is a store operation switching part that, when both two address specification parts are busy, cancels a store operation on split image information A to a storage part thereof and switches to a store operation on split image information B to a storage part thereof, wherein the two pieces A and B of split image information each contain identical image information in the overlap area and one of the address specification parts controls a store operation on the split image information A to the storage part thereof and the other controls a store operation on the split image information B to the storage part thereof. The combined limitations are not found taught or fairly suggested by the prior arts made of record, considered alone or in combination.

Contact information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai C Pham whose telephone number is (703) 308-1281. The examiner can normally be reached on T-F (8:30-5:30).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benjamin R. Fuller can be reached on (703) 308-0079. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722, (703) 308-7724, (703) 308-7382, (703) 305-3431, (703) 305-3432 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



HAI PHAM
PRIMARY EXAMINER

May 14, 2003